

Last B2 Buy Used Process Built on Trust

"The Paradigm Process"

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Negotiating a \$453-million rework and conversion effort for an airplane slated to go to the Air Force Museum into a fully operational weapon system, admittedly is no small effort. And to do so in *less than 180 days* is indeed uncommon. Nevertheless, on Oct. 26, 1996, the Air Force completed negotiations for the rework and conversion of the B-2 Air Vehicle One (AV-1). This article tells the story of how a small core of people from the B-2 Systems Program Office (SPO) at Wright-Patterson Air Force Base in Dayton, Ohio, and the prime contractor, Northrop-Grumman, negotiated that effort in less than 180 days using "The Paradigm Process."

Admittedly, the process is not unique, but the successful and timely completion of this sizable negotiation by the B-2 SPO merits detailed documentation for those readers who may be involved in similar efforts. In addition to a detailed explanation of the process, the article also includes an experience-based suggestion and recommendation (at the end of each section) for improving the process still further.

Friends Share Information

Integrated Product Teams (IPT), IPT Pricing, Teaming on Proposals, "One Pass" — all are just a few of the names used to describe what the B-2 SPO calls the Paradigm Process.

Typically, friends share information, while enemies hide or distort information to

A B-2 Spirit prepares to receive fuel from a KC-135 during a mission in the European Theater supporting NATO Operation Allied Force.

U.S. Air Force photo by Staff Sgt. Ken Bergmann

gain an advantage. In essence, the Paradigm Process is a methodology that compensates for this very human of tendencies, and promotes working *with* the contractor as a *team* vs. the old adversarial way of doing business. The AV-1 SPO used the Paradigm Process to build trust between the contractor and the government personnel who comprised the AV-1 team. Above all else, trust allowed a small group of people, the AV-1 SPO, to complete a sizable procurement, worth nearly one-half billion dollars, in less than 180 days.

Forming a Core Team

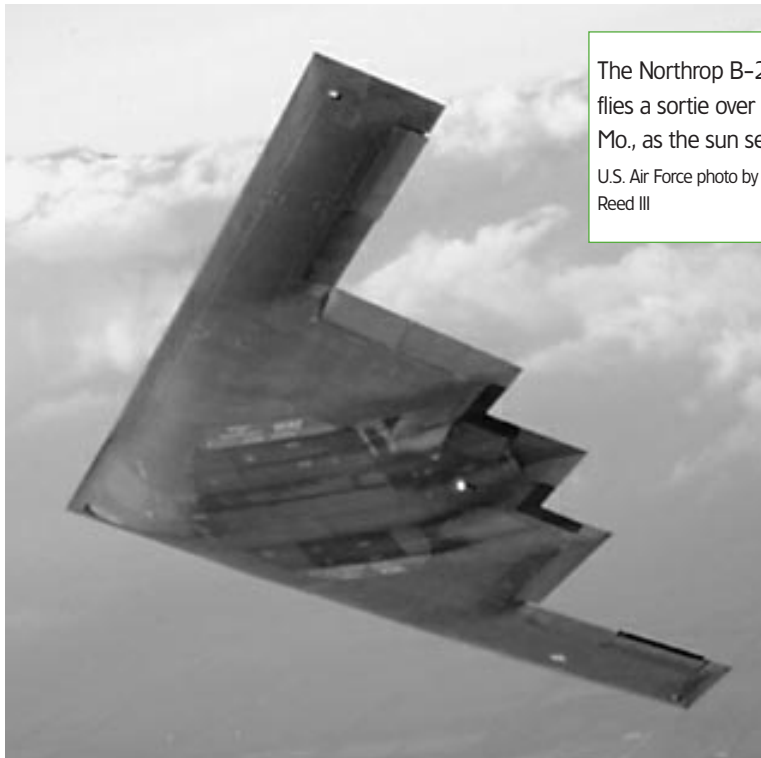
Beginning their efforts to bring the 180-day procurement from concept to reality, the B-2 SPO and Northrop-Grumman upper management chose team members from their respective organizations. Christened the AV-1 team to instill team identity in lieu of employer identity, their mission was clear: **Do it**

right the first time and find a way to make it work as you go along. Energized with the desire to succeed and working under severe time constraints, team members set about their assigned tasks, gleaned insights from previous programs that had implemented a similar method. While this was a good beginning, how could it be improved?

A key enabler of the paradigm process is to work together early. By early, this means before the government and contractor become so locked in their re-



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The Northrop B-2 Spirit bomber flies a sortie over Whiteman AFB, Mo., as the sun sets for the day.
U.S. Air Force photo by Master Sgt. Keith Reed III



A B-2 "Spirit" Stealth Bomber of the 509th Bomb Wing, Whiteman AFB, Mo., prepares for take-off during exercise Global Guardian.

U.S. Air Force photo by Tech. Sgt. Lance Cheung

spective positions that each refuses to compromise. Be *proactive*, not *reactive*.

Pre-Kickoff Meeting

For the B2 procurement effort, a pre-kickoff meeting may have proven instrumental. At this meeting, a core group of both government and contractor team members would be formed. Ideally, this core group should be no more than 10

people, with half the membership from the Government and half from the contractor. A pre-kickoff meeting should be scheduled so that everyone on the core team understands and buys into the Paradigm Process. Moreover, this core group must champion the process to the rest of the AV-1 team and must also have the verbal and written backing of their respective upper management. Without

that backing, the Paradigm Process is destined to fail.

Communication Process

Additionally, the core group must establish a communication process at the pre-kickoff meeting and use the process chosen regularly throughout the procurement. Had this been done, it would have enabled the AV-1 team to generate quick responses to potential problems before they became "show stoppers." Although the team did implement a chain of communication throughout the procurement, it proved inadequate and sporadic. Admittedly poor early on, communication improved over time. Normally, the team communicated via weekly video teleconferences, E-mail, written correspondence, and daily phone calls.

Direct Communication

It should be noted that communication was not limited to core group members only. All AV-1 team members participated. Members were empowered to reach agreement directly with their functional counterparts; for instance, contracts to contracts, logistics to logistics, etc., as opposed to multiple layers of approval normally associated with such communication. However, this did not eliminate the need for a single Person of Primary Responsibility to avoid duplication of work and wasting precious time.

Quick and frequent communication enabled team members, using the Paradigm Process, to complete the procurement within the prescribed time period. Direct functional communication was the key.

Kickoff Meeting

The next step should be to initiate every member of the procurement team, explaining the following items in detail:

- What they will be doing?
- How they will accomplish the task?
- Who will be responsible?

- What is the purpose of the schedule of events?
- Most importantly, exactly how does the Paradigm Process work?

The AV-1 team did not have an all-inclusive kickoff meeting, but instead, a series of small meetings with the three largest subcontractors — Hughes, Boeing, and the Northrop-Grumman Commercial Aircraft Division. The kickoff meeting, which was also the preliminary fact-finding meeting, not only served to instill the Paradigm Process, but also introduced the AV-1 team to the novel overall strategy that put the subcontractors' proposal preparation after the AV-1 team evaluation of their specific task sheets. Evaluations were to be completed before the three subcontractors' proposals were presented to the prime contractor.

AV-1 team members were told at the various mini kickoff meetings that they would work closely with each other to put together a proposal that reflected both the contractor's and the B-2 SPO's position. This was to be done, to the maximum extent possible, in both hours and material. Differences in the two positions would be the exception rather than the rule. The attendees at those meetings did not readily embrace the Paradigm Process. Change is always met with resistance. To reiterate — *Change is always met with resistance.*

The first in the series of small kickoff meetings explained the Paradigm Process to the attendees in detail. At the time, the prime contractor, Northrop-Grumman, bought into the process. In subsequent kickoffs, however, not all of the major subcontractors nor Northrop-Grumman's sister divisions accepted the challenge.

A useful tool at the outset of the Paradigm Process would be a videotaping of the first kickoff meeting. Had the B-2 SPO videotaped the first meeting, they could have used it to bring the numerous remaining subcontractor and Government personnel up-to-speed quickly and uniformly. Moreover, such a video, along with two AV-1 team members present to answer questions (one representing the government, the other the

prime contractor) could have been presented to the "Top 10" subcontractors (in rank order of dollar value). This would have sent the message, "The Paradigm Process will be used! Come on board!" This showing of solidarity would have encouraged subcontractors to also use the Process, which ultimately may have eliminated or at least minimized problems that surfaced during this procurement. A look at those problems, as well as successes, follows.

Beware of "Show Stoppers"

Although not the largest subcontractor, Hughes presented the largest challenge. Seemingly ignoring the Paradigm Process, Hughes conducted the procurement in their normal fashion; for them it was business as usual. Allowing neither Northrop nor the SPO to review their task sheets before they completed their proposal, they were also very apprehensive about giving information to the Defense Contract Audit Agency (DCAA) auditor. That fact slowed the AV-1 team's analysis of their effort.

As a result, negotiations with Hughes were prolonged with many false starts and slow-rolling techniques implemented by both sides. All these problems impacted the completion schedule. Communication was also a problem. Contention over hours-per-task in the Hughes evaluation caused a minor breakdown. Unable to reach an agreement, Northrop-Grumman and Hughes jointly decided to table the matter until negotiations. This decision was in direct opposition to the philosophy of the Paradigm Process, which is to settle differences as soon as possible — work it early while the problem is still small.

To free the logjam, select members of the AV-1 core team traveled to Hughes, and eventually reached an agreement. If communication with Hughes had been better, core team intervention would not have been necessary. Hughes would have been a small problem and not a potential show stopper.

Buying In

Boeing was not initially part of the Paradigm Process, but once the Boeing AV-

1 team members explained the process to Boeing's upper management during the task assessment phase, the company bought into it wholeheartedly. Overall, Boeing did an excellent job of working together with the prime contractor, SPO, DCAA, and the Defense Contract Management Command (DCMC). They allowed joint fact-finding on task assessment sheets with everyone present — a decision that contributed greatly to the timely completion of the procurement. The AV-1 team spent many weeks at the Boeing plant in Seattle, Wash., evaluating the Boeing task sheets. This teaming worked so well that the prime contractor used the DCAA position for material and rates; and DCMC used Northrop-Grumman's evaluation, with only a cover page explaining the few differences between the two evaluations. A breakdown did occur with Boeing, however, later in the acquisition.

Boeing and DCMC were also negotiating rates and factors in this same time frame. A message came to the SPO that both sides had walked away from the table. These rate negotiations had to be completed before the AV-1 negotiation could complete theirs. In an effort to help the AV-1 team complete their negotiations in a timely manner, the SPO took on the job of facilitating the DCMC-Boeing rate negotiations. Calling the highest government representative resident in Seattle, the Corporate Acquisition Contracting Officer (CACO), the SPO asked him to look into the program. With his help, the rates and factor negotiations were quickly put back on track. This was one more obstacle eliminated because the AV-1 team worked so closely together.

DCAA and DCMC also were present at all the kickoff meetings although not in the numbers that were needed. DCAA's job was to evaluate material at the prime contractor and all the subcontractors, as well as provide rates and factors. DCAA also took on the task of compiling all the subcontractor and prime contractor audits into a single coherent report. DCMC's tasks were to, whether on their own or with the help of the SPO, evaluate hours at the prime contractor as well

as the subcontractors. Because they are a large organization with many experienced people, DCMC was in a position to do this. Further, they are located at the appropriate prime contractor and subcontractors' facilities.

"Traffic Light" Methodology

The AV-1 team initiated a methodology that quickly solved potential problems and allowed the team to concentrate their efforts where they were needed. Essentially, the methodology worked just like a traffic light. After the team discussed and evaluated all the estimated hours for each task sheet, task sheets were then rated red, yellow, or green. **Red** meant that the SPO exceptions were greater than 10 percent of the contractor's estimate. **Yellow** meant the exceptions were from 5 percent to 10 percent. **Green** meant the exceptions were 5 percent or less.

Once the differences became less than 5 percent, or green, discussions stopped and the team moved on to the remaining differences. This method helped size the problems and eliminate them early. Although, not all task sheets became green, most did.

This methodology resulted in only one task sheet reflecting a difference of more than 10 percent, or red, by the start of negotiations. In this case, the prime contractor and the SPO simply agreed to disagree. And although the two parties discussed the difference during the negotiation phase, visibility was quickly lost because of the type of contract. In the end, the SPO negotiated only the bottom line; the contract was a firm fixed price.

The Proposal

The prime contractor's team worked very hard to put together a good proposal and in record time. They put in many late nights, long hours, and weekends to make it happen. Without their Herculean efforts, the usually lengthy proposal process would have stopped the timely completion of the procurement.

Government personnel did anything they could, making calls from the SPO

to appropriate DCAA and DCMC field offices to help overcome adverse opinions in audits, to help explain any exceptions, and to let all government personnel know that this procurement was being worked as a team — it was not to become a forum for voicing old problems. If the problems specifically affected the B-2 procurement, the AV-1 team worked them. If not, these problems were put on a shelf to be worked at a later time. The AV-1 procurement would not be held hostage to problems that were not germane to the AV-1 negotiation. The primary motivating factor must be completion of the current contractual action.

One set of the problems that always surfaces with a proposal is additions, deletions, and changes. These happen because all things change over time. This proposal was no exception. As they worked the procurement, the AV-1 team made additions based on new information and many changes to subcontractor's bids, which were generated by the short time given the subcontractors by the prime contractor to prepare the proposals.

The team gave the prime contractor 90 days to prepare the proposal; but the prime contractor, in turn, had to give the subcontractors time to prepare their proposals. The subcontractors also had third- and fourth-tier subcontractors to contend with. If the fourth tier was given 30 days, and the third tier 30 days, the second tier 30 days, and the prime contractor 90 days, then that would have equated to 180 days. As a result, the AV-1 team would have been late completing the negotiation.

To expedite the proposal process, the team published contractor guidance, urging potential subcontractors to prepare proposals based on the most current information available but not to hold up the proposal process because a third- or fourth-tier subcontractor failed to respond in a timely manner. Instead, the AV-1 team used telephone quotes or earlier quotes and increased them based on inflation. These quotes were updated as more current information became available.

The prime contractor prepared their proposal but kept the AV-1 team current by promptly communicating changes that occurred such as subcontractor negotiations they completed, and any other fact germane to the negotiation.

The Government Objective

Once the contractor presented the proposal to the government, the tide shifted. It was now up to the government to set their objective based on the proposal, SPO technical analysis, DCAA audits, subcontractor evaluations/audits, and their own logic. The entire government team did the work. The AV-1 SPO portion of the team worked together to develop the terms and conditions, warranty, swing clause, and price analysis. The team's effort solidified the objective and helped negotiations go smoothly. Negotiations were made somewhat simpler because Northrop-Grumman rates and factors at the prime were negotiated right before the government completed their objective. This removed rates and factors as a problem.

In addition, the "traffic light" methodology used to create the hours really paid off. The government objective reflected less than a 2-percent difference from the contractor's position. The entire government team worked on the Business Clearance Document. Members wrote on their areas of expertise so that the AV-1 schedule would not slip. There were no heroes, no lone rangers — just a team working together to achieve its goal.

The objective flowed smoothly through business clearance at all levels because the entire team was very knowledgeable about the objective, not just the Procuring Contracting Officer and price analyst. No surprises were forthcoming, and even though problems surfaced with some of the subcontractors, enough information became available to formulate a reasonable position. No one subcontractor or one issue became a show stopper.

At this point in the Paradigm Process, two obstacles emerged, both stipulations dictated to the AV-1 team by upper management on the government side. The first was that the proposal of the main

subcontractor, Boeing, must first be negotiated before the AV-1 team completed final negotiations. The second was a limit on the percentage of profit. These two stipulations were outside the direct control of the AV-1 team and either, alone, could have stopped timely completion of the procurement. They did not. When all was said and done, the team completed the Boeing negotiations, and the profit limitation was not breached.

No Games, No Tricks

The AV-1 team completed negotiations in three days, with the government's offer considered a FABIO (First and Best Initial Offer). Capitalizing on all the work the AV-1 team had done, the government's offer was intended to reach quick, fair, and equitable negotiated settlement. There would be no games, no tricks, and the government would in no way destroy the AV-1 team's trust and camaraderie — an environment created through the hard work and mutual efforts of the entire AV-1 team. The negotiations were to end the procurement the same way it started — as a team. And the AV-1 team's purpose remained the same: to work together with the mutual goal of successfully completing the AV-1 negotiation on schedule and within the budget dictated by Congress.

One of the problems with the procurement was no-bids as a result of parts obsolescence. Subcontractors may not be building a part anymore because the company went out of business, the part may be based on old technology, or building parts in quantities of only one or two is no longer a profitable venture. The AV-1 found alternative sources for parts to overcome this obstacle.

Another problem was a decision to use spare parts, originally earmarked for the existing fleet, to lower the cost of the procurement. The depots' upper management originally opposed the decision. A study completed by the AV-1 team changed their position. This study, based on probabilities and estimates, projected the likelihood that a specific part would be used. Then, it was determined how many were available for immediate use. Essentially, we were able to procure installs from the spare inventories at the depots. Money was given to the depots to make or buy some replacements.

As we alluded to earlier in this article, the last problem encountered was between the prime subcontractor, Boeing, and Northrop-Grumman. Rate negotiations between Boeing and DCMC came

to a standstill. Northrop-Grumman, Boeing, and the SPO discussed and dissected the problem. Hourly telephone calls between team members and the two companies became commonplace. This entailed late nights for the SPO because of the time difference between the East and West Coasts and even a Saturday. After only two days, negotiations resumed. A forward pricing rate agreement issued for Boeing enabled Northrop-Grumman and Boeing to complete their negotiations. The following day, the AV-1 team completed negotiations. The AV-1 team members' unselfish dedication to the completion of the procurement was key to meeting and even surpassing the goals of this procurement.

A Way of Life

The Paradigm Process is not just a way to do procuring; it is a way of life. Working with people, building trust, making friends, keeping promises, accomplishing a joint goal is the way that individuals, groups, teams, corporations, and nations should treat each other.

Editor's Note: For questions or comments on this article, contact White at Tony.White@afit.af.mil and Kesler at Twyla.Kesler@wpafb.af.mil.

BRYANT STUDENT AZEL KODI AWARDED DSMC COMMENDATION

The Defense Systems Management College Commendation Award was presented to Azel Kodi in a ceremony at Bryant Adult Alternative School, Alexandria, Va., Feb. 11, 2000, as part of the DSMC-Bryant School Partnership in Education Program. Presenting the award was DSMC Deputy Dean, College Administration and Services Dave Scibetta.

Kodi was born in Sudan and lived in Egypt four years before immigrating to the United States in 1996 at the age of 17. Soon after arriving, she enrolled at Bryant Adult Alternative High School. A member of the National Honor Society, she maintains a 3.9 grade point average. She is also on the Student Leadership Committee. Azel plans to enroll in

Northern Virginia Community College and pursue a career in engineering.

The DSMC Commendation Award is given to honor students who improve and maintain a 2.8 grade point average; exhibit community involvement through participation in school activities; volunteer for leadership opportunities; demonstrate good citizenship skills; exhibit upstanding behavior in school and community; attend classes regularly; and exhibit responsibility by assisting teachers and other students in classroom activities. The award is presented semiannually and reflects the ideals in DSMC's motto: *Ductus Doctrina Dominato*, or Leadership, Scholarship, Management.

